

## **Numerical approximations; sometimes being close is good enough**

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Grobner bases and the algorithms that produce them continue to be a wonderful and powerful tool.

Unfortunately, their computation can sometimes overwhelm a computer on problems where one would really like to know the answer.

Numerical methods in non-linear algebra has led to advances and insights in settings beyond the reach of current symbolic systems

but the output one obtains is sometimes not in a form that is useful for a commutative algebraist.

It has been the goal of many to meld several of the best features of symbolic computation and numeric computation.

This talk will outline a couple of elementary methods that have proven to be useful in this direction.